MAR 1952 51-4C

CLASSIFICATION RESTRICTED
SECURITY INFORMATION
CENTRAL INTELLIGENCE AGENCY
INFORMATION FROM
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT
CD NO.

STAT

COUNTRY	USSR	DATE OF INFORMATION	1943
SUBJECT	Economic; Technological - Railroad equipment	DATE DIST.	23 Jun 1953
HOW PUBLISHED	Book		
WHERE PUBLISHED	Moscow	NO. OF PAGES	5
DATE PUBLISHED	1943		
LANGUAGE	Russian	SUPPLEMENT TO REPORT NO.	

THIS IS UNEVALUATED INFORMATION

SOURCE: Spravochnik po Remontu Paravozov (Manual for Steam Locomotive Repairs) N.N. Zalit and V.V. Vul'f, Transzheldorizdat, Moscow, 1943.

SOVIET LOCOMOTIVE REPAIR NORMS

Norms Between Capital and Medium Repairs

The run norms between capital repairs of road-service locomotives are 390,000 kilometers and not less than 4 years in the case of switching locomotives.

The run norms between medium repairs or between capital and medium repairs, or vice versa, are 130,000 kilometers for road-service locomotives and not less than 2 years for switching locomotives.

Norms Between Running Gear Repairs

The run norm between running gear repairs is, on an average, 40,000 kilometers for all series. This norm is generally the minimum for the entire railroad network. Specific norms for each locomotive terminal are made by the system's administration, depending on the section, ballast, locomotive series, and other local operating conditions.

Norms Between Washing Repairs

The average norm for the railroad network is 5,000 kilometers. The average norm over the different systems varies from 4,500-7,500 kilometers.

Specific norms for each terminal are established by the chief of the railway system. The norms depend on the quality of water and vary according to the different types of locomotives as follows:

Locomotives with condensed steam	7,000-12,000 km
Passenger locomotives	6,000-10,000 km
Series FD locomotive	4,000-7,000 km
Series E, SO, other freight locomotives	3,500-6,000 km
Switching locomotives	14-15 days

CLASSIFICATION RESTRICTED

STATE	X	NAVY	X	NSRB		DISTRIBUTION	
ARMY	X	AIR	X	FBI			

STAT

Layover Norms During Repairs

Type Repairs	Locomotive Series	Norm
Capital, in plant	All series	12 days
Medium, in plant	" "	9 "
Medium, in terminal	" "	7-9 "
Running gear	" "	4 "
Washing out	FD, IS, M, L	20 hours
" "	SOk	16 "
" "	E, SO, Su, others	14 "

In the case of plants, these norms represent the average time which elapses between placing a locomotive into the stripping stall and delivering it to the inspector. The People's Commissariat of Railways establishes specific norms for each plant, depending on the locomotive series repaired.

The norms for medium repairs made at a terminal are the average for the network. Specific norms for individual terminals and particular series of locomotives are established by the administration of a particular railway system on the basis of a schedule set up by the People's Commissariat of Railways. This schedule provides 10 days for Series FD and 8 days for Series E in the case of medium repairs, and 5 days for Series FD and 3½ days for Series E in the case of running-gear repairs. These norms include the entire period of time from the moment the locomotive is placed into the terminal's shop, in the case of medium repairs, or into the stripping stall, in the case of running-gear repairs, until it is accepted by the inspector and senior engineer.

Washing repair norms start with inspection and end upon acceptance of the locomotive by the inspector and senior engineer.

Nomenclature and Periods of Inspection of Certain Parts of Locomotive

Firebox	Every washout; period compulsory for all terminals
Overflow	At least every 3 months; period compulsory for all terminals
Water gauges	Every washout; period compulsory for all terminals
Spark arresters and extinguishers	Same as for water gauges
Sandbox	Same as for water gauges
Safety valves, pressure gauges	Same as for water gauges
Injectors; feed tubes	25,000-30,000 kilometers
Water purifier	12,000-15,000 "

Reducing valve	25,000-30,000 kilometers
Main cutoff valve on Series FD and IS	25,000-30,000 "
Water tubes for boilers	Every washout; period compulsory for all terminals
Valve bushings and valves	Series FD, IS, M: 12,000-15,000 km Other road-service locomotives: every washout Switching locomotives: at least every 3 months
Pistons and cylinders	Section-type rings: 25,000-30,000 kilometers Plain rings: 12,500-15,000 kilometers Except on Series FD and IS, cylinders on all series removed for inspection. On FD and IS, cylinders can be inspected during washout repairs without removing rod from crosshead
Main rod mechanism, including removal	12,000-15,000 kilometers. A spotter made of magnifying glass is used to inspect rods after they are covered with chalking compound
Lubricator compressors and valves, including removal	12,000-15,000 kilometers
Wash out water tank on tender; control valve; strainer	12,000-15,000 "
Wash out fuel area	25,000-30,000 "
Clean boiler elements without removing them from boiler	Every washout; compulsory for all terminals

Automatic Braking Equipment

Periodic Inspection

Compressors	
Simple and tandem-type locomotives	Freight: 15,000-20,000 kilometers Passenger: 20,000-30,000 "
Compound-type locomotive	40,000-60,000 kilometers
Brake equipment parts	Every running-gear repair

Examination

Compressors	
Simple and tandem-type locomotives	Freight: 8,000-10,000 kilometers Passenger: 10,000-15,000 "

STAT

Compound-type locomotive	20,000-30,000 kilometers
Pushing, switching, export, other non-train locomotives	At least once every 2 months
Brake equipment parts	Every washout

Hydraulic Testing of Air Reservoirs

Main and auxilliary reservoirs	Every 3 years

Special Equipment on Engines Using Condensed Steam

Condensors and filters	2,000-2,500 kilometers
Flue gas pump	12,000-15,000 "
Water feed pump	12,000-15,000 "
Water separator	12,000-15,000 "
Water level indicator	20,000-25,000 " 30,000-35,000 kilometers for engines having blower
Pump plunger of blower	12,000-15,000 kilometers
Blower drive, gear wheel, flexible connections	20,000-25,000 "
Feed pump lubricator	12,000-15,000 "
Wash out water tank	20,000-25,000 kilometers; in case of impure water due to floods or heavy rains, every washing out period
Valves: feed, close, reverse, control	Every washing out period
Clean the shafts and cooler sections	12,000-15,000 kilometers
Change lubrication	As soon as slime is detected in lubricant

Special Equipment on Engines Using Water Heaters

Filter	Every washing out period
Hot-water cutoff	" " " "
Supply valve	" " " "
Water-level indicator	" " " "
Water feed pump	12,000-15,000 kilometers

STAT

Steam chest, steam ejector, reverse valve	12,000-15,000 kilometers
By-pass valve	" " "
Clean out cold-water cut-off, cutoff valve, and relief valve	" " "
Throttle and live steam connections	" " "

- E N D -